

This rehabilitation program is designed to return the individual to their full activities as quickly and safely as possible, following reverse total shoulder arthroplasty. Modifications to this guideline may be necessary dependent on physician specific instruction or other procedures performed. This evidence-based guideline is criterion-based; time frames and visits in each phase will vary depending on many factors. The therapist may modify the program appropriately depending on the individual’s goals for activity following this surgery.

This guideline is intended to provide the treating clinician a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient’s post-operative care based on exam/treatment findings, individual progress, and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

**Precautions:**

- Avoid shoulder **adduction** combined with **internal rotation** and **extension past neutral** for 10-12 weeks. If dislocation is to occur, it is typically with the combination of internal rotation and adduction in conjunction with extension (i.e. tucking in a shirt, personal hygiene, etc.)
- Wear sling for 4-6 weeks
- Week 4: Initiate AAROM
- Week 6: Initiate AROM
- Week 10: Initiate strengthening

Phase	Suggested Interventions	Goals/Milestones for Progression
<b>Phase I</b>  <i>Before surgery</i>	<i>Educate:</i> Anatomy, existing pathology, post-op rehab schedule, bracing, and expected progressions  <i>Instruct on Pre-Op exercises:</i> - Home safety - Equipment recommendations  <i>Overview of hospital stay:</i> -Nursing care -Therapy services -Pharmacy -Discharge planning	<i>Goals of Phase:</i> 1. Understanding of pre-op exercises, instructions and overall plan of care  <i>Criteria to Advance to Next Phase:</i> 1. Surgery

<p><b>Phase II</b></p> <p>Begin immediately post-op</p> <p>Weeks: 0-4 weeks</p>	<p><i>Immediate Post-operative instructions:</i></p> <p>Patient/family education and training for:</p> <ul style="list-style-type: none"> <li>- Safety with mobility/transfers</li> <li>- Icing and elevation (when laying in supine use pillow under arm to support glenohumeral joint)</li> <li>- Home exercise program</li> <li>- Appropriate home modifications</li> </ul> <p><i>Precautions:</i></p> <ul style="list-style-type: none"> <li>- Use sling continuously except while doing therapy or light, protected activities – such as desk work, for 4 weeks</li> <li>- Wear sling while sleeping for 6 weeks</li> <li>- No active shoulder motion for 5 weeks, all planes</li> <li>- No active internal rotation for 6 weeks</li> <li>- External rotation range of motion limited to 0 degrees (neutral)</li> <li>- Relative rest to reduce inflammation</li> </ul> <p><i>Suggested therapeutic exercise</i></p> <ul style="list-style-type: none"> <li>- Elbow, wrist and neck active range of motion; gripping exercises</li> <li>- Passive range of motion of shoulder             <ul style="list-style-type: none"> <li>• Flexion: 0-120 degrees</li> <li>• Abduction: 0-90 degrees</li> <li>• ER (at 30 degrees abduction): 0 degrees</li> <li>• IR (at 30 degrees abduction): 30 degrees</li> </ul> </li> <li>- Codman’s/Pendulum exercises</li> </ul>	<p><i>Goals of Phase:</i></p> <p>Functional goals:</p> <ol style="list-style-type: none"> <li>1. Reduce pain and swelling in the post-surgical shoulder</li> <li>2. Maintain active range of motion of the elbow, wrist and neck</li> <li>3. Protect healing of repaired tissues and implanted devices</li> </ol> <p><i>Criteria to Advance to Next Phase:</i></p> <ol style="list-style-type: none"> <li>1. The patient must be at least 4 weeks post-operative</li> <li>2. The patient tolerates PROM within acceptable pain levels.</li> </ol>
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<p><b>Phase III</b></p> <p>Begin after meeting Phase II criteria, usually 5-8 weeks after surgery</p>	<p><i>Precautions:</i></p> <ul style="list-style-type: none"> <li>- Wean out of the sling slowly based on the safety of the environment during weeks 5 and 6. Discontinue use of the sling by the end of week 6</li> <li>- Wear sling while sleeping for 6 weeks</li> <li>- No active internal rotation for 6 weeks</li> <li>- External rotation range of motion limited to 20 degrees weeks 5 and 6, then to 45 degrees for weeks 7 and 8</li> </ul> <p><i>Suggested Therapeutic Exercise:</i></p> <ul style="list-style-type: none"> <li>- Controlled restoration of passive and active assistive range of motion</li> <li>- Initiate AAROM to tolerance</li> <li>- Pain free sub-max isometrics for shoulder flexion, abduction, extension and external rotation.</li> <li>- Initiate rhythmic stabilization drills at 6 weeks.</li> <li>- Activate shoulder and scapular stabilizers in a protected position of 0 degrees to 30 degrees of shoulder abduction</li> <li>- Correct postural dysfunctions</li> <li>- Can initiate AROM at week 6: supine or side lying flexion, salutes, supine serratus punch</li> <li>- Periscapular strengthening (scapular retraction, standing scapular setting, supported scapular setting, low row, inferior glide)</li> <li>- Elbow: Bicep curl, resistance band bicep curls, and triceps</li> </ul>	<p><i>Goals of Phase:</i></p> <ol style="list-style-type: none"> <li>1. Controlled restoration of passive and active assistive range of motion</li> <li>2. Activate shoulder and scapular stabilizers in a protected position of 0 degrees to 30 degrees of shoulder abduction)</li> <li>3. Correct postural dysfunctions</li> </ol> <p><i>Criteria to Advance to Next Phase:</i></p> <ol style="list-style-type: none"> <li>1. The patient must be at least 8 weeks post-operative</li> <li>2. The patient can complete AAROM and shoulder isometrics without compensation and with minimal pain.</li> </ol>
<p><b>Phase IV</b></p> <p>Begin after meeting Phase III criteria, usually 8 weeks after surgery</p>	<p><i>Precautions:</i></p> <ul style="list-style-type: none"> <li>• External rotation range of motion limited to 60 degrees</li> <li>• No lifting greater than 10 lbs.</li> </ul> <p><i>Suggested Therapeutic Exercise:</i></p> <ul style="list-style-type: none"> <li>- PROM: full in all planes, gradual PROM IR in scapular plane &lt;/= 50 degrees</li> <li>- Active, active assistive, and passive range of motion at the shoulder</li> </ul>	<p><i>Goals of Phase:</i></p> <ol style="list-style-type: none"> <li>1. Functional shoulder active range of motion in all planes (Shoulder flexion &gt;140 degrees)</li> <li>2. Normal (rated 5/5) strength for shoulder internal rotators and deltoid</li> <li>3. Correct any postural dysfunction</li> </ol>

	<ul style="list-style-type: none"> <li>- Deltoid strengthening – progression of the Jenkins exercises; seated shoulder elevation with cane with active lowering, ball roll on wall</li> <li>- Open kinetic chain shoulder rhythmic stabilizations in supine (e.g. stars or alphabet exercises; IR/ER in scaption plane and flexion at 90-125 degrees in supine)</li> <li>- Gentle closed kinetic chain shoulder and scapular stabilization drills – wall ball circles and patterns</li> <li>- Proprioceptive neuromuscular facilitation patterns – D1 diagonal lifts and D2 Diagonal lifts</li> <li>- Scapular strengthening (row on aerobics ball, serratus punches, etc.)</li> <li>- Supine shoulder flexion with resistance band to 90 degrees</li> <li>- Week 9-11: Periscapular strengthening: resistance band shoulder extension, seated resistance band rows, rowing, lawnmowers, quadruped with active shoulder flexion, bird dog, robbery exercises</li> </ul>	<p><i>Criteria to Advance to Next Phase:</i></p> <ol style="list-style-type: none"> <li>1. The patient must be at least 12 weeks post-operative</li> <li>2. No compensation patterns with AROM; minimal pain with AROM.</li> </ol>
<p><b>Phase V</b></p> <p>Begin after meeting Phase IV criteria, usually 12-16 weeks after surgery</p>	<p><i>Precautions:</i></p> <ul style="list-style-type: none"> <li>- Week 12-16: no lifting greater than 15 lbs.</li> </ul> <p><i>Suggested Therapeutic Exercise:</i></p> <ul style="list-style-type: none"> <li>- Multi-plane shoulder active range of motion with a gradual increase in the velocity of movement while making sure to assess scapular rhythm</li> <li>- Shoulder mobilizations as needed</li> <li>- Rotator cuff strengthening in 90 degrees of shoulder abduction, and overhead (beyond 90 degrees of shoulder abduction)</li> <li>- Scapular strengthening and dynamic neuromuscular control in open kinetic chain and closed kinetic chain positions</li> <li>- Core and lower body strengthening</li> <li>- Periscapular: Push-up plus on knees, “W” exercise, resistance band Ws, prone shoulder extension Is, dynamic hug, resistance band dynamic hug, resistance band forward punch, forward punch, T and Y, “T” exercise</li> </ul>	<p>Goals of Phase:</p> <ol style="list-style-type: none"> <li>1. Normal strength and endurance of deltoid at 90 degrees of shoulder abduction and scaption</li> <li>2. Advance proprioceptive and dynamic neuromuscular control retraining</li> <li>3. Achieve 75 degrees of shoulder external rotation</li> <li>4. Correct postural dysfunctions with work and sport specific tasks</li> <li>5. Develop strength and control for movements required for work or sport</li> </ol> <p><i>Criteria to Advance to Next Phase:</i></p> <ul style="list-style-type: none"> <li>- Full shoulder active range of motion in all planes and multi-plane movements</li> <li>- Normal (rated 5/5) strength of shoulder</li> </ul>

	<ul style="list-style-type: none"> <li>- Deltoid: continue gradually increasing resisted flexion and scaption in functional positions</li> </ul>	
<p><b>Phase VI</b></p> <p>Begin after meeting Phase V criteria, usually 16 weeks after surgery</p>	<p><i>Suggested Therapeutic Exercise:</i></p> <ul style="list-style-type: none"> <li>- Multi-plane shoulder active range of motion with a gradual increase in the velocity of movement while making sure to assess scapular rhythm</li> <li>- Shoulder mobilizations as needed</li> <li>- Rotator cuff strengthening in 90 degrees of shoulder abduction as well as in provocative positions and work/sport specific positions, including eccentric strengthening, endurance and velocity specific exercises</li> <li>- Scapular strengthening and dynamic neuromuscular control in overhead positions and work/sport specific positions</li> <li>- Work and Sport specific strengthening</li> <li>- Core and lower body strengthening</li> <li>- Work specific program, swimming program or overhead racquet program as needed</li> <li>- Multi-plane shoulder active range of motion with a gradual increase in the velocity of movement while making sure to assess scapular rhythm</li> <li>- Shoulder mobilizations as needed</li> <li>- Rotator cuff strengthening in 90 degrees of shoulder abduction, and overhead (beyond 90 degrees of shoulder abduction)</li> <li>- Scapular strengthening and dynamic neuromuscular control in open kinetic chain and closed kinetic chain positions</li> </ul>	<p>Goals of Phase:</p> <ol style="list-style-type: none"> <li>1. Normal strength and endurance of deltoid at 90 degrees of shoulder abduction and scaption</li> <li>2. Advance proprioceptive and dynamic neuromuscular control retraining</li> <li>3. Correct postural dysfunctions with work and sport specific tasks</li> <li>4. Develop strength and control for movements required for work or sport</li> <li>5. Develop work capacity cardiovascular endurance for work and/or sport</li> </ol> <p><i>Criteria to Advance to Discharge</i></p> <ol style="list-style-type: none"> <li>1. The patient may return to sport after receiving clearance from the orthopedic surgeon and the physical therapist or athletic trainer</li> </ol> <p>Return to sport decisions are based on meeting the goals of this phase</p>